a second barrier electrically connecting the second end cap on the second end surface of the first film resistor and the second end cap on the second end surface of the second film resistor and mechanically bonding the film resistors;

the first barrier extending from the portion of the first end cap on the top surface of the first film resistor to the portion of the first end cap on the bottom surface of the second film resistor;

the second barrier extending from the portion of the second end cap on the top surface of the first film resistor to the portion of the second end cap on the bottom surface of the second film resistor.

REMARKS

OVERVIEW

Claims 1-3, 7-11, 16-18, 20, 22-25 and 30 are pending in this application. Claims 1, 7, 8, 9, 16, 17, 18, and 30 have been amended. This response is an earnest effort to place all claims in proper form for allowance. Claims 7-8 have been cancelled.

ISSUES UNDER 35 U.S.C. §102 (b)

The Examiner has rejected claim 30 under 35 U.S.C. §102(b) as being anticipated by Chiang et al. (WO 99/53505). In particular, the Examiner refers to Figure 6 of Chiang et al. and indicates that the Examiner considers the substrate to be 55, the end caps 31, 51 and the resistive film 17. The Examiner also indicates that there are barriers 54 in Figure 9 (Office action of December 10, 2003, page 2, numbered paragraph 2). The Examiner's remarks are concerning as Chiang discloses a different structure from the Applicant's invention. For example, the Applicant does not consider the transverse conductive member 31 or 51 (hollow tubes formed by a plating process in which the exposed surfaces are plated first with copper and then with solder) to be end

caps (Chiang, p. 13, lines 26-28). The Applicant has added the language "each end cap extending onto the top surface, the bottom surface, the first side surface and the second side surface" to claim 30 to make clear that a termination or an electrode is not necessarily an end cap. The end caps of the Applicant's invention are shown best in Figure 1. It should be remembered that one of the advantages of the Applicant's claimed invention is that a preexisting chip resistor that can be independently used as a surface mount chip resistor is used in forming the stacked chip resistor of the present invention. The laminar devices of Chiang et al. do not have the end caps of the Applicants claimed invention.

The Examiner points to what are called "interfacial electrical connections (54)" (Abstract) as barriers. As such a name would suggest, these interfacial electrical connections of Chiang et al are used to interconnect the faces of separate elements 17 (See Figure 9). The Applicant does not believe that the Examiner's use of the term "barrier" is consistent with the broadest reasonable interpretation of the term to the extent that the Examiner indicates the "interfacial electrical connections" to be barriers. To clarify, however, claim 30 has been amended to recite "the first barrier extending from the portion of the first end cap on the top surface of the first film resistor to the portion of the first end cap on the bottom surface of the second film resistor" and "the second barrier extending from the portion of the second end cap on the top surface of the first film resistor to the portion of the second end cap on the bottom surface of the second film resistor." The interfacial electrical connections (54) of Chiang et al are not barriers and, in any event, their structure does not meet the limitations of claim 30.

Therefore, it is respectfully submitted this rejection to claim 30 should be withdrawn as Chiang et al does not disclose each and every limitation of claim 30.

ISSUES UNDER 35 U.S.C. §103(a)

Claim 30 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Murakami et al. in view of Chiang et al. The Examiner relies upon Chiang et al to disclose barriers (Office Action, p. 2, numbered paragraph 4). As previously discussed, Chiang et al does not disclose the barriers of claim 30. Chiang et al only discloses interfacial electrical connections. Aside from their structural differences previously discussed, these interfacial electrical connections of Chiang et al also would not provide the advantages of the barriers of Applicant's invention. In particular, the fact that the Applicant's barriers surround the electrodes would provide additional stability and increased surface area contact. If more than two devices are stacked, Chiang et al would require additional interfacial electrical connections because Chiang's interfacial electrical connections are not connected to the end surfaces of the devices. Of course, the Applicant's barriers would also absorb more heat than Chiang's interfacial electrical connections. Heat absorption is of particular significance given that the Applicant's invention is a "power chip resistor."

For all of these reasons, it is respectfully submitted that the Examiner properly withdraw the rejection to claim 30.

Claims 1-2, 7-11, 16-18, and 24-25 have been rejected under 35 U.S.C. §103 as being unpatentable over Chiang et al. in view of either Abe et al. '390 or Kawase '723. The Examiner indicates that the "claimed invention is disclosed at Figs. 6-9 of Chiang except the barrier made of nickel and glass frit." (Office Action, p. 3, numbered paragraph 5). The Examiner is mistaken to the extent that the Examiner considers Chiang to disclose the claimed structure of the barrier. To clarify the structure of the barriers, language concerning both the end caps and the barriers has been added to claim 1. It is respectfully submitted that this amendment makes clear that the

interfacial electrical connections of Chiang are not barriers as these interfacial electrical connections do not surround the end caps. Therefore, it is respectfully submitted that this rejection should be withdrawn on that basis. As claims 2 and depend from claim 1, it is respectfully submitted that these rejections also be withdrawn. As claims 7-8 have been cancelled, these rejections are moot.

Claim 9 requires "a first barrier covering and being electrically connected to the end caps on the first end surface of the substrate" and "a second barrier covering and being electrically connected to the second end caps on the opposing end surface of the substrate." The Applicant respectfully submits that the Examiner has not given proper consideration of the terms "end caps" and "covering" as used in claim 9. The term "end cap" is intended to make clear the Applicant is claiming a structure that caps the end surface of the substrate. The term "covering" makes clear that the barrier fully covers these end surfaces. Therefore, it is respectfully submitted that these limitations are not taught by Chiang et al and the rejection to claim 9 should be withdrawn. As claims 10-12 and 16-17 depend from claim 9, it is respectfully submitted that these rejections should also be withdrawn.

Claim 18 has been amended to make clear that the structure of each end cap provides for "fully covering a first or second end surface of the substrate." Therefore, it respectfully submitted that the end caps of claim 18 are distinguished from Chiang et al. Claim 18 has also been amended to make clear that the structure of each nickel barrier provides for "surrounding" its respective end cap. The Applicant respectfully submits that this difference in structure further distinguishes claim 18 from Chiang et al. Therefore, this rejection to claim 18 should be withdrawn. As claims 24-25 depend from claim 18, it is respectfully submitted that these rejections should also be withdrawn.

Claims 1-3, 7-12, 16-18, 20 and 22-25 have been rejected under 35 U.S.C. §103(a) as being unpatentable over JP 6283301 in view of Hashimoto, or as an alternative, further in view of Claypool. The Examiner recognizes that JP'301 does not disclose the nickel barrier and does not disclose film resistors stacked together with glass therebetween (Office Action, p. 4, numbered paragraph 6). It is further noted that the so-called barrier of JP'301 is a described in the title as a "lead frame." To further distinguish JP'301, claims 1, 9, and 18 have been amended to also describe the barrier as "barrier plating." Support for this amendment is found, for example, in the Specification, p. 5, line 14. Hashimoto discloses nickel plating, but there is no motivation or suggestion to substitute the lead frame of JP'301 with metal plating. Therefore, it respectfully submitted that these rejections should be withdrawn. As claims 2-3 depend from claim 1, claims 7-8 have been cancelled, claims 10-12 and 16-17 depend from claim 9, and claims 20, 22-25 depend from claim 18, it is respectfully submitted that these rejections also be withdrawn.

Claim 23 has been rejected under 35 U.S.C. §103(a) as being unpatentable over JP 6283301 in view of Hashimoto, further in view of Nakamura et al. Claim 23 depends from claim 18. Therefore, it is respectfully submitted that this rejection to claim 23 should also be withdrawn.

This is a request under the provision of 37 CFR § 1.136(a) to extend the period for filing a response in the above-identified application for one month from March 10, 2004 to April 10, 2004. Applicant is a large entity; therefore, please charge Deposit Account number 26-0084 in the amount of $110.00 for one month to cover the cost of the extension. Any deficiency or overpayment should be charged or credited to Deposit Account 26-0084.

No other fees or extensions of time are believed to be due in connection with this amendment; however, consider this a request for any extension inadvertently omitted, and charge any additional fees to Deposit Account No. 26-0084.

Reconsideration and allowance is respectfully requested.

Respectfully submitted,

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